

ABSTRACT

An implantable medical device that includes a housing, a valve disposed within the housing, a first pressure sensor disposed within the housing upstream of the valve, and a second pressure sensor disposed within the housing downstream of the valve. A CPU is disposed within the housing and is electrically connected to the first pressure sensor and the second pressure sensor. To communicate the measured pressure information to an external device, the CPU compares the pressure measured by the first pressure sensor to the pressure measured by the second pressure sensor and wirelessly communicates these compared pressures to an external device. Alternatively, the CPU may wirelessly communicate the absolute value of the pressure measured by the first pressure sensor and the second pressure sensor to the external device. Additionally, the CPU and sensors may be non-invasively powered using optical or acoustical methods.